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Application Number	09/607,162
Filing Date	June 29, 2000
First Named Inventor	Thomas B. Hall
Art Unit	2672
Examiner Name	Harrison, Chante E.
Total Number of Pages in This Submission	38
Attorney Docket Number	21301.2

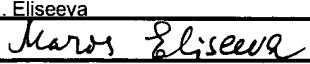
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MAR 17 2004

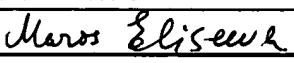
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Maria M. Eliseeva	
Signature		
Date	March 8, 2004	

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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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FEE TRANSMITTAL
for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 905.00)

Complete if Known

Application Number	09/607,162
Filing Date	June 29, 2000
First Named Inventor	Thomas B. Hall
Examiner Name	Harrison, Chante E. MAR 17 2004
Art Unit	2672
Attorney Docket No.	21301.0002 Technology Center 2600

RECEIVED**METHOD OF PAYMENT (check all that apply)**
 Check Credit card Money Order Other None
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FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Description	
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 420	2252 210	Extension for reply within second month	
1253 950	2253 475	Extension for reply within third month	
1254 1,480	2254 740	Extension for reply within fourth month	740.00
1255 2,010	2255 1,005	Extension for reply within fifth month	
1401 330	2401 165	Notice of Appeal	
1402 330	2402 165	Filing a brief in support of an appeal	165.00
1403 290	2403 145	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 665	Petition to revive - unintentional	
1501 1,330	2501 665	Utility issue fee (or reissue)	
1502 480	2502 240	Design issue fee	
1503 640	2503 320	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 770	2810 385	For each additional invention to be examined (37 CFR 1.129(b))	
1801 770	2801 385	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

SUBTOTAL (1) (\$)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-20** =	X	=
Multiple Dependent	-3** =	X	=

Large Entity	Small Entity	Fee Description
Fee Code (\$)	Fee Code (\$)	
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)

**or number previously paid, if greater; For Reissues, see above

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 905.00)

SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	Maria M. Eliseeva	Registration No. (Attorney/Agent)	43,328	Telephone	781-863-9991
Signature	Maria M. Eliseeva			Date	March 8, 2004

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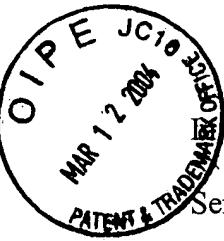
This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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141 Brief
by J. H. M.

103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Re: Thomas B. Hall and Walter Burt
Serial No: 09/607,162

Filed: June 29, 2000

For: System and Method for Transmitting
Interactive Synchronized Graphics

Confirmation No: 3955

Group: 2672

Examiner: Harrison, Chante
E.

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APPELLANTS' BRIEF

Mail Stop Appeal Brief- Patents
Assistant Commissioner for Patents
P.O. Box 1450,
Alexandria, Virginia 22313-1450

Sir:

This is the Applicants' appeal from the final Office Action, mailed April 30, 2003, (Paper No. 12).

A four month extension of time is requested for this response.

Real Party of Interest

Musicnotes, Inc., the assignee of the present application, is the real party in interest.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of Claims

Claims 1-20 are pending in this application. Claims 1-20 stand finally rejected pursuant to the outstanding Office Action.

Status of Amendments

All amendments have been entered. There were no post final amendments or proposed amendments.

03/15/2004 SFELEKE1 00000156 502233 09607162

02 FC:2254 740.00 DA

03/15/2004 SFELEKE1 00000156 502233

01 FG:2402 165.00 DA

Summary of the Invention

Issues

1. Whether Claims 1-4, 6, and 12 are anticipated under 35 U.S.C. 102(e) by Cave, U.S. Patent 4,841,438.
2. Whether Claims 5, 7-10, and 14-16 are obvious under 35 U.S.C. 103(a) over Cave as applied to Claim 1 in view of Kennedy.
3. Whether Claims 17-20 are obvious under 35 U.S.C. 103(a) over Cave in view of Eller.

Grouping of Claims

Claims 1-20 stand or fall separately.

Argument

1. With regard to Claims 1-4, 6, 11 and 12, which stand finally rejected under 35 USC 102(e) over Cave, Cave is conceptually different from the present invention and cannot anticipate the relevant Claims.

Specifically, in its Response to Arguments, the Patent Office asserts that (1) since “Cave teaches multimedia data comprising sound, music, text, graphics and video (Fig. 2A)”, it somehow means that Cave teaches “logically separating the data into graphical data and multimedia data”, as claimed in Claim 1 and Claim 11. Also, on page 3 of the Office Action the Patent Office writes that (2) “Cave discloses separating data into graphical and multimedia data (FIG. 2A)...” Applicant asserts that these arguments are without merit. With regard to (1), it is impossible to see how simply teaching multimedia data also teaches logically separating the data into two data subsets. In fact, Cave doesn’t teach that. With regard to (2), examination of FIG. 2A doesn’t reveal how it teaches logical separation of data into graphical data and multimedia data. As described in Cave, in FIG.

2A “each playback icon 205 represents a corresponding media object to be played within a time window indicated by the left and right extremities of the icon 205 as located on the x-axis of playback grid 203.” (Col. 6, lines 22-26). Further Cave describes “[T]his constraint is shown as pipe 255, where parallel lines perpendicular to the x-axis represent the bandwidth available in a connection through which the designer wishes to deliver the media objects scripted in corresponding playback score 201 (as illustrated in FIG. 2A)” (Col. 8, lines 16-21). FIG. 2A shows the bandwidth corresponding to each object in a playback score, which is understandable: different objects in a playback score most probably require different bandwidth. Since Cave describes a visual aid for bandwidth allocation, that visual aid tool in FIG. 2A illustrates bandwidth requirements for different objects, all of which are contained in a playback score. Nothing in FIG. 2A, as well as in the whole disclosure of Cave, discloses that the graphical data and the multimedia data are logically separated, as claimed in Claim 1 and Claim 11 of the present invention. Therefore, the Patent Office is incorrect in its assertion that Cave discloses separating data into graphical and multimedia data.

Furthermore, it is Applicant’s strong assertion that the Cave patent doesn’t have anything to do with the bounding box feature claimed in Claim 1 and Claim 11. Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.¹ To that end, it is also noted that during ex parte prosecution, claims are to be given their broadest reasonable interpretation consistent with the description of the invention in the specification.²

The term “bounding box” is coined by Applicant. It is neither a generic dictionary word nor a term known in the relevant industry. The task of transmitting a musical score (such as digitized sheet music) in the form of an interactive logically separated compact file has

¹ Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996).

² In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

not had a known solution before the Applicant's present invention, so in order to describe and claim the invention, Applicant had to coin that term. A definition of this coined term is clearly stated in the specification. "Although the bounding boxes are not explicitly shown on the screen when a piece of music is displayed, they are implicitly present in the representation of music" (page 3, lines 15-17), meaning that the coined term "bounding box" describes an object invisible (not displayed) to a user. Contrary to the meaning of that coined term, Cave discloses a visual aid, an icon, for bandwidth allocation. Cave's icons are not bounding boxes. Therefore, Cave cannot disclose the structure of bounding boxes as claimed in Claim 1 and Claim 11.

The Patent Office argues in its Office Action that "Cave also discloses each track being a path through the hierarchical structure because each track is executed during runtime to demonstrate a multimedia presentation." How executing each track during the run times in Cave makes this track structure hierarchical is hard to see. The dictionary definition of the word "hierarchy" in the Merriam-Webster dictionary online is given as "a graded or ranked series" (a copy is enclosed with this brief). Cave describes a "[S]cript embodied by playback score 201 on FIG. 2A. Looking at FIG. 2C, download icons 257 show when to start delivering individual media objects and at what speed..." (Col. 8, lines 4-7).

Similarly, in Col. 6, lines 23-27 Cave states that "[E]ach playback icon 205 represents a corresponding media object to be played within a time window indicated by left and right extremities of the icon 205 as located on the x-axis of playback grid 203." What Cave talks about is visualization of sequential ordering of the playback, in other words visualizing the timing of bandwidth allocation according to when a certain object should be played. In the present invention, while the display of the areas of a musical score corresponding to the structure of bounding boxes is synchronized, a hierarchical nature of the structure of bounding boxes in the present invention is not even visualized and is not a temporal concept. The hierarchy of bounding boxes of the present invention claimed in Claim 1 and Claim 11 ranks from the largest to the smallest (page 10, second paragraph), consistent with the recited dictionary definition. The hierarchical structure of the bounding boxes lies in their ranking between level 1 and level 6, not in when a particular area of a musical score corresponding to a bounding box is displayed to a user. Therefore,

Cave shows no hierarchical structure and cannot anticipate Applicant's Claim 1 and Claim 11.

Furthermore, Claim 1 recites "a hierarchical structure of bounding boxes serving to synchronize displayed graphical data..." Cave does not disclose displayed graphical data. As follows from FIG. 2A, Cave teaches to visualize allocation of the bandwidth necessary to schedule the delivery of a graphical object within varying constraints of available bandwidth, which has nothing to do with actually displaying graphical data using a hierarchical structure of bounding boxes and claims in Claim 1.

With regard to Claim 3, the Patent Office is incorrect in asserting that Cave discloses a musical score. A dictionary definition of a musical score says that it is "a written form of a musical composition, parts for different instruments appear on separate staves on large pages; 'he studied the score of the sonata'." (copy enclosed)³. What Cave teaches is a tool used to visualize bandwidth allocation for delivery of media objects. In the abstract Cave says that a system designed who will use its tool orchestrates the playback of a series of media objects represented as a playback icons on a playback "score" analogous to a musical score. Which is exactly the point: Cave icons represent visual bandwidth allocation for different objects, they do not represent a musical score of a musical piece with notes and staves and clefs. A musical score is an analogy Cave makes to explain what his abstract bandwidth allocation icons do, but the playback score in Cave has nothing to do with defining a musical score, as claimed in Claim 3.

Claims 2-4 and 6 depend off independent Claim 1 and cannot be anticipated by Cave.

Claim 12 depends off independent Claim 11 and cannot be anticipated by Cave.

2/3. Claims 5, 7-10, and 14-16 cannot be obvious under 35 U.S.C. 103(a) over Cave as applied to Claim 1 in view of Kennedy, since the prima facie case of obviousness

³ The undersigned attorney has a degree in music received after 8 years of music school training as a concert pianist. It is universally known that a musical score is a representation of a musical piece with notes, staves, clefs and other music notation.

has not been made by the Patent Office. Claims 17-20 cannot be obvious under 35 U.S.C. 103(a) over Cave in view of Eller.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference (or references when combined) must teach or suggest all the claim limitations⁴.

With regard to independent Claims 7, 14 and 17, all the arguments presented by Applicant in support of patentability of Claim 1 are repeated here in their entirety. Cave doesn't disclose hierarchical structure of bounding boxes, as well as logical separation of the data into a graphical and multimedia data subsets. Kennedy doesn't disclose such elements either, so neither of the patents themselves or combined teaches or suggest Claims 7, 17 and 14. Nor is there any motivation to combine with a reasonable expectation of success. Applicant therefore asserts that Claims 7, 17 and 14 are patentable. Claims 8-10 depend off Claim 7 and are therefore patentable. Claims 15-16 depend off Claim 14 and are therefore patentable. Claims 18-20 depend off Claim 17 and are therefore patentable.

Respectfully submitted,

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Date: March 8, 2004

⁴ MPEP 2142-2143

Appendix

1. (original) A computer implemented method for providing compact representation of data, the method comprising:
 - logically separating the data into graphical data and multimedia data; and providing at least three sequencing schemes within the multimedia data by:
 - providing a first sequencing scheme comprising a hierarchical structure of bounding boxes serving to synchronize displayed graphical data with a series of time ordered events;
 - providing a second sequencing scheme comprising a sequence map containing one or more tracks, each track being a path through the hierarchical structure of bounding boxes; and
 - providing a third sequencing scheme comprising at least one time map defining the series of time ordered events.
2. (original) The method of Claim 1, wherein the graphical data are a musical notation, and wherein the series of time ordered events correspond to a musical performance.
3. (original) The method of Claim 1, wherein the hierarchical structure of bounding boxes is defined for a musical score.
4. (original) The method of Claim 2, wherein providing the third sequencing scheme comprises providing a plurality of time maps corresponding to a plurality of musical performances.
5. (original) The method of Claim 1, wherein providing the three sequencing schemes is done server-side before transmitting the data to a user.

6. (original) The method of Claim 1, further comprising providing a single bit for each track defined in the sequence map, each single bit for each track indicating whether a bounding box is associated with a time event.
7. (original) A system for compressing data, the system comprising:
 - a server storing the data, the data having graphical data logically separate from a multimedia data;
 - the multimedia data comprising a plurality of data subsets; and
 - the data subsets comprising:
 - a plurality of bounding boxes, the bounding boxes having a hierarchical structure;
 - a sequence map containing one or more tracks, each track corresponding to a sequence of the bounding boxes; and
 - a time map synchronizing the sequence map with an audio or video recording.
8. (original) The system of Claim 7, further comprising a display for visualizing graphical data and multimedia data.
9. (original) The system of Claim 7, wherein one or more bounding box of the plurality of bounding boxes is tagged with information which can be added or removed and which is displayed in response to a user's request.
10. (original) The system of Claim 7, wherein the plurality of bounding boxes defines locations of the graphical data on the display.
11. (original) A computer implemented method of providing interactive graphics via a computer network, the method comprising:
 - providing logically separate graphical data and multimedia data sections corresponding to the interactive graphics;

providing a hierarchical set of bounding boxes within the multimedia data section; and

utilizing a hierarchy of bounding boxes to facilitate positioning and zoom of the displayed interactive graphics in response to a user's input.

12. (original) The method of Claim 11, further comprising utilizing the hierarchy of bounding boxes to facilitate hi-lighting of the displayed interactive graphics according to the user's input.

13. (original) The Method of Claim 12, further comprising hi-lighting of the displayed interactive graphics in synchronization to an external performance.

14. (original) A system for providing interactive graphics, the system comprising:
a server containing graphical data and multimedia data corresponding to the interactive graphics; and

a hierarchical set of bounding boxes within the multimedia data, the bounding boxes facilitating positioning and zoom of the displayed interactive graphics and hi-lighting the displayed interactive graphics in response to a user's input, and hi-lighting the displayed interactive graphics in synchronization to an external performance.

15. (original) The system of Claim 14, further comprising a computer network allowing the user to download the interactive graphics from the server.

16. (original) The system of Claim 14, wherein the interactive graphics is sheet music and wherein the external performance is a musical performance.

17. (original) A method of compressing graphical data, the method comprising:
providing a server storing the graphical data;
providing a hierarchical structure of bounding boxes controlling display of the graphical data on a viewing device; and

utilizing contiguity and hierarchy of the bounding boxes to eliminate repetitive encoding of contiguous elements of bounding boxes, thereby reducing the number of bytes used to represent the graphical data and providing compressed graphical data.

18. (original) The method of Claim 17, further comprising defining a position of a subsequent bounding box on the viewing device in terms of an offset from a previous bounding box.

19. (original) The method of Claim 17, further comprising transmitting the compressed graphical data via a computer network between the server and a user.

20. (original) The method of Claim 17, further comprising facilitating the user's interaction with the graphical data by programming the viewing device to be able to determine hierarchical relationships of all bounding boxes in the hierarchical structure.